REMARKS

Applicant wishes to thank the Examiner and his supervisor, for extending the courtesy of granting a personal interview to Dan Hart and Nathalie Zammatteo on April 16, 2007. Claims 27, 28, 30, 33, and 36 have been amended to remove reference numbers and to specify that the transcriptional factors to be screened and/or quantified are activated transcriptional factors. Support for the amendments can be found in the Specification as filed, for example, in paragraphs [0058], [0060] and [0106]. New Claims 39, 40 and 41 have been added. Support for the new claims can be found in Claims 36 and 27. Additionally, the Abstract has been amended: the reference numbers have been removed. No new matter has been introduced by these amendments. The following addresses the substance of the Office Action.

Priority

The Examiner has noted that the applicant allegedly did not file a certified copy of the priority document EP00870057.7 in the parent application 09/816,763. The Examiner requested to submit such a document or evidence that such document was filed previously. Applicants provide herein a copy of the application post card mailed September 21, 2001 which was stamped by the US PTO on October 1, 2001, from the parent US application No.: 09/816,763, that lists among the submitted documents a certified copy of the priority document, European Application #00870057.7. Furthermore, the Office Actions dated June 29, 2004 and January 7, 2005 in the parent application No.: 09/816,763 both acknowledge that "All certified copies of the priority documents have been received."

However, as a courtesy, Applicants has now resubmitted another certified copy of the priority document in the parent application No. 09/816,763.

Specification

The Examiner has objected to the Abstract of the Disclosure for reciting reference numbers. Applicant has amended the Abstract accordingly.

Definiteness

The Examiner has rejected Claims 27-33 and 35-38 under 35 USC §112, second paragraph, as being indefinite. Specifically, Claims 27 and 36 are asserted to be unclear for reciting the limitation "and possibly a second labeled antibody". Applicant has amended Claims 27 and 36 by canceling these limitations, and added new Claims 39 and 40, which recite these

limitations. Claim 27 was further asserted to be unclear for reciting reference numbers. Claim 27 has been amended accordingly. Claim 36 was further asserted to be unclear for reciting a double-stranded DNA sequence bound to a first member of a binding pair able to interact with a second member of the binding pair forming a spacer of at least 6.8 nm. Claim 36 has been amended to specify that the spacer is formed either by the double stranded DNA sequence, the binding pair, or the double stranded DNA sequence and the binding pair.

Therefore, Applicants respectfully request that the rejection of Claims 27-33 and 35-38 under 35 USC §112, second paragraph as indefinite be withdrawn.

Non-obviousness

The Examiner has rejected Claims 27-29, 31-33 and 36-38 under 35 USC §103(a) as being allegedly unpatentable over Peterson et al. (US 5,563,036) in view of Hibma et al. (1994 *Nucl. Acids Res.* **22**:3806-3807). Specifically, the Examiner stated that a person of ordinary skill in the art would have been motivated to combine the labeled antibody detection method of Hibma et al. with the transcription factor binding method of Peterson et al. to quantify transcription factor binding to double stranded oligonucleotides immobilized on a solid surface.

> To establish a *prima facie* case of obviousness a three-prong test must be met. First, there must be some suggestion or motivation, either in the references or in the knowledge generally available among those of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success found in the prior art. Third, the prior art must reference must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991).

However, as the Examiner agreed during the interview, none of the cited references teach or suggest a kit comprising a solid support comprising a DNA sequence which binds an activated transcription factor and a primary antibody or a specific hypervariable region thereof which is specific for the activated form of the transcription factors. As discussed above, Peterson et al. (5,563,036) describe assays for screening for drugs which interfere with sequence-specific protein-DNA binding. Many transcription factors bind to DNA in both the active and inactive form. Rather than detecting the activation state of the transcription factors, Peterson is directed to assessing the ability of a candidate drug to affect the degree to which a labeled transcription factor binds to its cognate sequence. Thus, there is no teaching or suggestion in Peterson of a kit comprising a solid support comprising a DNA sequence which binds an activated transcription

factor and a primary antibody or a specific hypervariable region thereof which is specific for the activated form of the transcription factors.

The Hibma reference describes an ELISA based assay for detecting the binding of a transcription factor to its cognate DNA sequence using antibodies directed to the transcription factor. The transcription factor in Hibma is purified and this form is by definition not activated through post translational modification or the association with cofactors, as observed in stimulated cells. There is no teaching or suggestion in Hibma of using antibodies specific for the activated form of the transcription factor. Applicants note that in Hibma the protein to be detected, as illustrated in the example with papillomavirus type 16 E2 protein, is added to the assay in a purified form. This purified protein is by definition not activated through post-translational modifications or the association with cofactors, as observed in stimulated cells following activation of a signaling cascade. Thus, there is no teaching or suggestion in Hibma of a kit comprising a solid support comprising a DNA sequence which binds an activated transcription factor and a primary antibody or a specific hypervariable region thereof which is specific for the activated form of the transcription factors.

In view of the foregoing, Applicants maintain that the cited references fail to support a *prima facie* case of obviousness. These references both fail because neither provides the requisite motivation to combine, reasonable expectation of success, or teaches all the limitations of the claimed invention. Because of these deficiencies, Applicants submit that the PTO has failed to articulate a *prima facie* case of obviousness, and as such, the present rejection of Claims 27-29, 31-33 and 36-38 under 35 U.S.C. 103(a) should be withdrawn.

The Examiner has rejected Claims 27, 30 and 35 under 35 USC §103(a) as being allegedly unpatentable over Peterson et al. (US 5,563,036) in view of Church et al. (US 6,326,489). Specifically, the Examiner stated that a that a person of ordinary skill in the art would have been motivated to combine the high throughput screening method of Church et al. with the transcription factor binding method of Peterson et al. to quantify transcription factor binding and screen compounds directed to double stranded oligonucleotides immobilized on a solid surface.

As discussed above, there is no teaching or suggestion in Peterson of a kit comprising a solid support comprising a DNA sequence which binds an activated transcription factor and a

primary antibody or a specific hypervariable region thereof which is specific for the activated form of the transcription factors. Many transcription factors bind to DNA in both the active and inactive form. Rather than detecting the activation state of the transcription factors, Peterson is directed to assessing the ability of a candidate drug to affect the degree to which a labeled transcription factor binds to its cognate sequence. Church et al. do not cure this deficiency of the primary reference of Peterson et al. Therefore, Claims 27, 30 and 35 are non-obvious over the cited art, and their rejection under 35 USC §103(a) should be withdrawn.

CONCLUSION

Applicants have endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to initiate the same with the undersigned.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: April 27, 2007

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